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FAILURE REVIEW OVERSIGHT BOARD (FROB) CONCLUDES EXPRESS AM4R INVESTIGATION; RETURN TO FLIGHT MISSION SUCCESS ON SEPTEMBER 28

September 29, 2014- The ILS Failure Review Oversight Board (FROB) has concluded its work, after a detailed review of the findings, conclusions and identified corrective action plans from the Russian State Inter-agency Commission (IAC) and Khrunichev (KhSC) investigations into the probable cause of the May 16 failure of the Russian Federal Proton mission carrying the Express AM4R satellite.

The members of the FROB reviewed the initial assessment provided by the IAC along with the additional testing and investigations that the IAC directed to be performed by Khrunichev and their subsidiaries. Based on the data presented, it was agreed by the FROB that the probable cause of the failure was the loss of structural integrity of a bolted interface that attaches the Stage III steering engine turbopump to the main engine structural frame. The loss of integrity led to an excessive steering engine turbo pump vibration environment that damaged a fuel inlet line to the oxidizer gas generator, resulting in a fuel leak. The loss of fuel led to the premature shutdown of the turbopump and loss of stage control authority and ultimately loss of mission approximately 545 seconds into the flight. Additionally, the FROB concurs that the identified corrective action plan will adequately address the identified probable cause and contributors to the failure.

"We thank all of the FROB participants—our customers, insurance underwriters, technical experts and all others—for their diligent work and generous time; their continued support is sincerely appreciated," said ILS Chief Technical Officer and Vice President of Programs and Operations, John Palmé.

The successful Proton return to flight mission for the Russian Federal Government occurred on September 28, 2014; all of the required corrective actions were incorporated for this mission. The scheduling of the remainder of the ILS Proton manifest for 2014 is currently being determined.

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